

Appl. No. 10/031,333
Amdt. dated February 4, 2004
Reply to Office Action of Aug. 7, 2003

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in this application.

Listing of Claims

Claims 1-9 (canceled)

Claim 10 (new): An olefin derived copolymer satisfying the following requirements (1) and (2):

(1) strength at breakage of the olefin derived copolymer measured according to JIS K6251 is not more than 2.0 MPa, and

(2) a resin composition consisting of the olefin derived copolymer and a polypropylene derived resin, which resin contains a 20°C xylene-soluble part in an amount of not more than 20% by weight, satisfies the following expressions, (expression 1) and (expression 2),

$$R[3/5] - R[2/6] \geq 0.15 \quad (\text{expression 1})$$

$$S[2/6] \geq -800 \quad (\text{expression 2})$$

wherein R[3/5] and R[2/6] are multiple correlation coefficients of a primary straight line obtained by a method consisting of the steps of:

(i) plotting a content by weight (Pa) of the olefin derived copolymer contained in the resin composition as a horizontal axis, and plotting an elongation at breakage, EB (%) measured according to JIS K6251, of the resin composition as a vertical axis to obtain a curve,

(ii) quintic multiple-regressing the above-obtained curve to obtain a multiple regression formula, which formula essentially contains data of at least seven Pa points, Pa=0.00, 0.20, 0.30, 0.40, 0.50, 0.60 and 0.70, and further in case of containing more than

Appl. No. 10/031,333
Amdt. dated February 4, 2004
Reply to Office Action of Aug. 7, 2003

seven Pa points, all the Pa values essentially have mutually constant intervals of not more than 0.10; and

(iii) approximating a multiple regression curve in the sectional regions of $P_a = 0.30-0.50$ and $P_a = 0.20-0.60$ of the above-obtained multiple regression formula according to a method of least square to obtain the above-mentioned primary straight line, and wherein

$S[2/6]$ is a gradient of a primary straight line (formula) obtained by approximating the above-mentioned multiple regression curve in the sectional region of $P_a = 0.20-0.60$ according to a method of least square.

Claim 11 (new): A thermoplastic resin composition comprising:

- (i) 1 - 99% by weight of a thermoplastic resin, and
- (ii) 99 - 1% by weight of the olefin derived copolymer according to Claim

10.

Claim 12 (new): A thermoplastic resin composition comprising the following (A) and (B) as essential components:

- (A) the thermoplastic resin composition according to Claim 11, and
- (B) at least one resin selected from the group consisting of a rosin derived resin, a poly terpene derived resin, a synthetic petroleum resin, a coumarone derived resin, a phenol derived resin, a xylene derived resin, a styrene derived resin and an isoprene derived resin.

Claim 13 (new): A pellet comprising the thermoplastic resin composition according to Claim 11 or 12 as an essential component.

Claim 14 (new): A molded article comprising the thermoplastic resin composition according to Claim 11 or 12 as an essential component, which article is molded according to any one molding method selected from the group consisting of an extrusion molding method, a profile extrusion molding method, a multi-color extrusion

Appl. No. 10/031,333
Amdt. dated February 4, 2004
Reply to Office Action of Aug. 7, 2003

molding method, a covering (with core) extrusion molding method, an injection molding method, a compression molding method, an expansion molding method, a blow molding method, a powder molding method, a calender molding method, a kneading processing and an inflation molding method.

Claim 15 (new): A sheet or a film comprising the thermoplastic resin composition according to Claim 11 or 12.

Claim 16 (new): A laminated material, which comprises at least one layer containing the thermoplastic resin composition according to Claim 11 or 12.

Claim 17 (new): A base material sheet or a base material film comprising the thermoplastic resin composition according to Claim 11 or 12.

Claim 18 (new): An adhesive sheet or an adhesive film comprising the base material sheet or the base material film according to Claim 17, which sheet or film has a pressure sensitive adhesive layer on at least one face thereof.

Claim 19 (new): An olefin derived polymer according to claim 10, wherein said expression 1 is:

$$R[3/5] - R[2/6] \geq 0.20.$$

Claim 20 (new): An olefin derived polymer according to claim 10, wherein said expression 1 is:

$$R[3/5] - R[2/6] \geq 0.25.$$

Claim 21 (new): An olefin derived polymer according to claim 10, wherein said expression 1 is:

$$R[3/5] - R[2/6] \geq 0.30.$$

Appl. No. 10/031,333
Amdt. dated February 4, 2004
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Claim 22 (new): An olefin derived polymer according to claim 10, wherein said expression 1 is:

$$R[3/5] - R[2/6] \geq 0.35.$$

Claim 23 (new): An olefin derived polymer according to claim 10, wherein said expression 1 is:

$$R[3/5] - R[2/6] \geq 0.40.$$

Claim 24 (new): An olefin derived polymer according to claim 10, wherein said expression 2 is:

$$S[2/6] \geq -200.$$

Claim 25 (new): An olefin derived polymer according to claim 10, wherein said expression 2 is:

$$S[2/6] \geq -100.$$

Claim 26 (new): An olefin derived polymer according to claim 10, wherein said expression 2 is:

$$S[2/6] \geq -50.$$

Claim 27 (new): An olefin derived polymer according to claim 10, wherein said olefin derived copolymer is selected from the group consisting of:

(1) olefin derived copolymers of ethylene and α -olefin with 3 - 20 carbons as indispensable monomers with which one or more monomer components chosen from polyene compounds, cyclic olefins, and vinyl aromatic compounds are arbitrarily copolymerized,

(2) olefin derived copolymers of ethylene and α -olefin with 4 - 20 carbons as indispensable monomers with which one or more kinds of monomer components chosen from polyene compounds, cyclic olefins, and vinyl aromatic compounds are arbitrarily copolymerized,

Appl. No. 10/031,333
Amdt. dated February 4, 2004
Reply to Office Action of Aug. 7, 2003

(3) olefin derived copolymers in which ethylene, propylene, and α -olefins with 4 - 20 carbons are indispensable monomers with which one or more kinds of monomer components chosen from polyene compounds, cyclic olefins, and vinyl aromatic compounds are arbitrarily copolymerized,

(4) olefin derived copolymers of propylene and α -olefins with 4 - 20 carbons as indispensable monomers with which one or more monomer components chosen from polyene compounds, cyclic olefins, and vinyl aromatic compounds are arbitrarily copolymerized,

(5) olefin derived copolymers that consist of monomer units based on ethylene and α -olefins with 4 - 20 carbons,

(6) olefin derived copolymers that consist of monomer units based on ethylene α -olefins with 4 - 20 carbons and polyene compounds,

(7) olefin derived copolymers that consist of monomer units based on ethylene, α -olefins with 4 - 20 carbons, and cyclic olefin compounds,

(8) olefin derived copolymers that consist of monomer units based on ethylene, α -olefins with 4 - 20 carbons, and vinyl aromatic compounds,

(9) olefin derived copolymers that consist of monomer units based on ethylene, α -olefins with 4-20 carbons, polyene compounds, and vinyl aromatic compounds,

(10) olefin derived copolymers that consist of monomer units based on ethylene, propylene, and α -olefins with 4 - 20 carbons,

(11) olefin derived copolymers that consist of monomer units based on ethylene, propylene, α -olefins with 4 - 20 carbons, and polyene compounds,

(12) olefin derived copolymers that consist of monomer units based on ethylene, propylene, α -olefins with 4 - 20 carbons, and cyclic olefin compounds,

(13) olefin derived copolymers that consist of monomer units based on ethylene, propylene, α -olefins with 4 - 20 carbons, and vinyl aromatic compounds,

(14) olefin derived copolymers that consist of monomer units based on ethylene, propylene, α -olefins with 4 - 20 carbons, polyene compounds, and vinyl aromatic compounds,

Appl. No. 10/031,333
Amtd. dated February 4, 2004
Reply to Office Action of Aug. 7, 2003

(15) olefin derived copolymers obtained by copolymerizing propylene and α -olefins with 4 - 20 carbons,

(16) olefin derived copolymers that consist of monomer units based on propylene, α -olefins with 4 - 20 carbons, and polyene compounds,

(17) olefin derived copolymers that consist of monomer units based on propylene, α -olefins with 4 - 20 carbons, and cyclic olefin compounds,

(18) olefin derived copolymers that consist monomer units based on propylene, α -olefins with 4 - 20 carbons, and vinyl aromatic compounds, and

(19) olefin derived copolymers that consist of monomer units based on propylene, α -olefins with 4 - 20 carbons, polyene compounds, and vinyl aromatic compounds.